3-2004

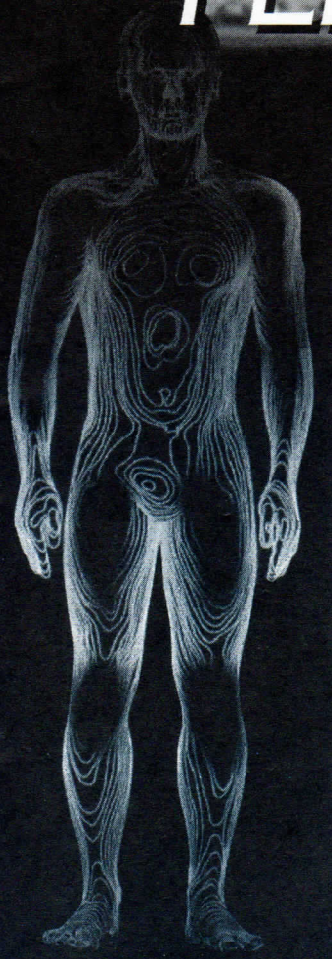
Flight Physician - March, 2004

Civil Aviation Medical Association

FLIGHT PHYSICIAN

A Publication of the Civil Aviation Medical Association

Volume 7, Number 2 March 2004



In This Issue

FAD DIETING 2
FROM THE EDITOR 3
FROM DC-3S TO 747S 4
FATIGUE IN AIRCREWS 6
ART, IRAQUI STYLE 8
OK PILOT OF THE YEAR ... 9
NEW MEMBERS 10
OBITUARY 11
CAMA CONSULTANTS ... 12
SUPPORTING MEMBERS . 13
NUTRITION, PART II 14
ON THE HORIZON 16

PILOT HIRING IN 2004

Is the Age Sixty Rule Approaching a Revisit?

BY JAMES R. ALMAND, M.D.

COMMERCIAL AVIATION took a big loss and challenge after the 9/11 catastrophe. Prior to that occurrence, the future of commercial air travel was booming – but 9/11 had a tremendous negative impact on passenger counts, public flying, aviation corporate bankruptcies, pilot furloughs, and a very shaky airline environment with each additional challenge to public confidence.

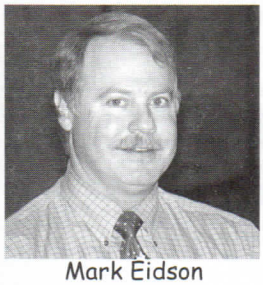
Today, in 2004, there remain almost 10,000 pilots in the US on furlough. But the industry is coming about, with 11,000 furloughed pilots finding new jobs since 9/11. In 2000, the airlines hired more than 19,000 pilots – a level yet to be reached in predictions for 2004. Last year, 4,600 commercial pilots found positions with the airlines.

The upturn in aviation pilot hiring is promising. Senior furloughed pilots are being called back, and new pilot hires can be expected. Early or mandatory age sixty retirements are opening positions for 300 to 500 pilots each year at each major (and some smaller) airline.

Continued on page 9

CAMA BOARD MEETING VISUAL MEMORIES

February 2004

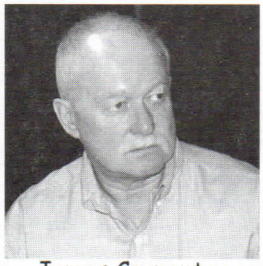


Mark Eidson

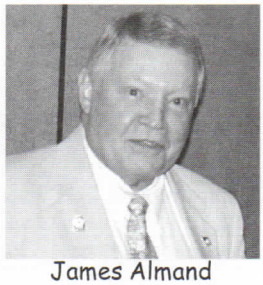
Alex Wolbrink

Ingrid Zimmer-Galler

Katherine Helleur



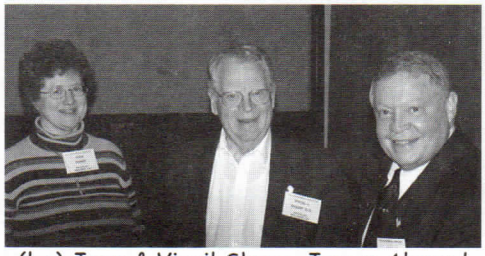
James Carpenter



James Almand

Susan Northrup

Robert Curry



(l-r) Jean & Virgil Sharp, James Almand

Rodney & Ruth Steward

Estol Belflower

Fad Dieting Dilemmas: What Works and What Doesn't

A nutritionist helps to determine how much food your body needs to achieve weight loss and which nutrients you are missing in your diet.

By Amy Hall, C.N., and David Bryman, D.O.

Amy Hall, C.N., is a Board-Certified Nutritionist specializing in all aspects of nutrition for health and weight management. She received her bachelor's degree from Arizona State University and a secondary bachelor's degree in Nutrition Sciences from American Health Science University in Colorado. She has been studying nutrition and health for more than ten years and is also a published author in many health and fitness-related magazines and makes regular television appearances to discuss nutrition issues. Amy is available for private nutrition consulting at her Phoenix-area office or via <www.nutritioncure.com>. Amy is part of Dr. Bryman's Bariatric team. —Ed.

With all the conflicting information, knowing where to start and which diet is right for your body type and lifestyle can be challenging. The first and most important fact when considering any of the latest diet crazes, is that any diet that eliminates a food group will naturally lead to a lowered metabolism and weight gain when the diet is stopped.

Take the *Atkins* and other low-carb diets for example: Because carbohydrates hold twice as much water as fat and protein, people on the Atkins plans see their overall weight drop in a short time, but if they had their body fat checked prior to starting the plan, they will see that it has gone up while their fat free mass and total body water decreased. This is very common when doing a bio-impedance analysis, which includes muscle weight and total body water.

People are disappointed to learn that losing fat-free mass (muscle) lowers the body's metabolic rate, and they now must eat less to maintain their current weight. Hence, the failure rate of the Atkin's diet is 98% over two years, and the yo-yo diet syndrome continues.

The *South Beach Diet* is another popular fad being tried by many, and while the first two weeks are very restrictive, it does gradually allow carbohydrates in the form of whole grains and starchy vegetables back in. One of the problems with this diet, however, is getting through those first few weeks. Without grains and other essential nutrients the body needs for energy; fatigue and irritability set in, and loss of lean body mass can occur as well.

Of course, there are many other diet plans on the market right now, including *The Zone, The Hollywood Diet, Cabbage Soup Diet*, and *Body for Life*, to name a few but, unfortunately, there is no quick-fix to taking off excess weight. The most fat the body will typically lose in a week is about 2.2 pounds and only by following a balanced diet and watching portion sizes. A balanced eating plan includes lean proteins, unsaturated fats, fruits, vegetables, complex carbohydrates/whole grains, and small amounts of dairy.

To be more specific, lean proteins include poultry, fish, tofu and soy, and low-fat meat alternatives. Complex carbohydrates/whole grains include 100% stone-ground, whole wheat breads, brown rice, oatmeal, and high-fiber cereals, as well as starchy vegetables like beans, legumes, peas, corn, and sweet potatoes.

Unsaturated "good" fats include avocado, olive oil, flaxseed oil, natural peanut butter, and raw nuts and seeds. The fat you want to decrease or avoid is saturated fats like corn/vegetable and peanut oils, mayonnaise, margarine, salad dressing, bacon, sausage, and most fried and junk foods. Low-fat diets are encouraged, but eating too little healthy fat will cause the body to store carbohydrates as fat, especially in women. The brain is made of fat, and fat is an essential macronutrient for good health.

Aside from following a more balanced diet and watching portion sizes, learning to eat out and order healthy dishes at restaurants can make a big difference in how you use energy (calories) each day. A good, healthy eating plan will incorporate restaurant food and help you to choose the best foods no matter where your day takes you. This is where a nutritionist can help you figure out how much food your body needs to achieve weight loss and which nutrients you are missing in your diet that may be causing food cravings, weight gain, or just making it difficult for you to lose weight.

Finally, adding any type of aerobic exercise and light weight resistance training will accelerate any weight loss plan, as well as increase your energy levels and help you deal with stress in a more positive way.

Before starting any diet, know what your goals are, what you can and can't live without, how it will affect your daily life, and if it is something that will allow you to lose weight in a healthy, lasting way.

FP

_FLIGHT_PHYSICIAN

A Publication of the Civil Aviation Medical Association (CAMA)

President
James R. Almand, M.D.

President–Elect
David Bryman, D.O.

Secretary-Treasurer
Gordon L. Ritter, D.O.

Executive Vice-President
James L. Harris, M.Ed.

BULLETIN Editor
David Bryman, D.O.

Associate Editors
Mark C. Eidson, M.D.
Petra A. Illig, M.D.
Alex M. Wolbrink, M.D.
Ingrid Zimmer-Galler, M.D.

CAMA Photographer
M. Young Stokes III, M.D.

The editors of *Flight*Physician welcome submission of articles, letters to the editor, news bits, interesting aeromedical cases, and photos for publication. Please mail text in typewritten form or on floppy disk (Microsoft Word preferred) to:

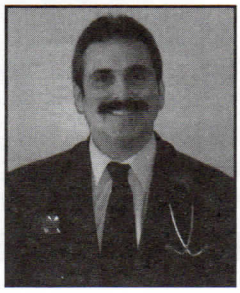
David Bryman, D.O.
5917 E. Danbury Rd.
Scottsdale, AZ 85254
Phone: (602) 549-2291
Fax: (602) 788-7951
E-mail: flydoc85d@aol.com

James L. Harris
CAMA Headquarters
P.O. Box 23864
Oklahoma City, OK 73123
(405) 840-0199
Fax: (405) 848-1053

LETTER FROM THE EDITOR

By David Bryman, D.O.

If this year's first board meeting under the direction of our CAMA president, Dr. James Almand, could be compared to flying, then we are wheels up and climbing with great speed.



Our board meeting in Dallas was very successful in identifying and beginning to implement our president's new strategic plan for the next several years.

One main area for CAMA's future will be to become more involved in the international community. We have come to enjoy fellowship with our international colleagues and have been pleased to have a large attendance at our meetings by AMEs from all over the world.

We are entertaining the idea of having more frequent CAMA educational seminars overseas to further facilitate our understanding, contribution, and enhancement of international civil aviation medicine.

Aviation medicine in the new millennium has global consequences and, as such, we must have dialog with the international community to advance our knowledge and our profession. Topics such as increased passenger loads, bio-terrorism, communicable diseases, sky marshal program, Homeland security, emergency contingency plans, and many others are constantly in the news since 9/11/01.

The recent SARS epidemic is a perfect example of how a cooperative international aviation medical community could prevent disaster.

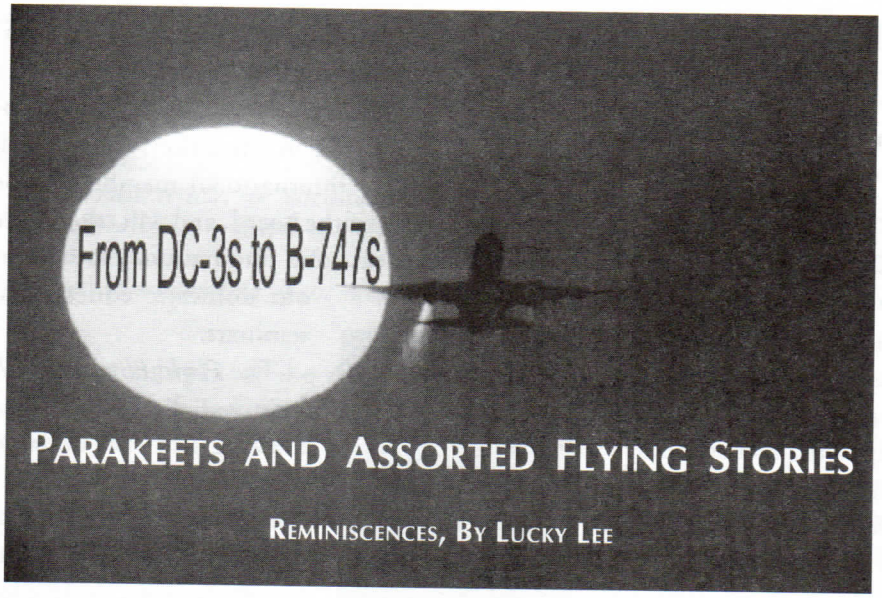
To help facilitate international cooperation in education, CAMA will invite international members to be part of the board, and will try to have at least one international speaker at our domestic educational seminars.

The *Flight Physician Bulletin* was discussed at the meeting and will undergo some changes as well. The bulletin is the backbone of our communication to our members. It is CAMA's forum for articles and items relevant to civil aviation medicine.

We will add some new sections to the contents such as an area honoring our members who have passed away. This section will be called "Members Gone West," and will honor their awards, accomplishments, and contributions to both CAMA and aviation medicine. CAMA has a rich past. We have had many outstanding members that have been instrumental in CAMA's success and the advancement of aviation medicine, and we would like to keep their memory alive.

In an effort to attract more articles and younger attendees at our meetings, the CAMA board of trustees will offer an award for the best original article submitted for publication in the bulletin by a student physician. The article must be relevant to aviation medicine. The student status refers to a physician in training to include a medical student, an intern, or a resident. The recipient will receive an award for outstanding achievement, as well as an invitation to the

Continued on page 12



PARAKEETS AND ASSORTED FLYING STORIES

REMINISCENCES, BY LUCKY LEE

Lucky Lee has been in the airline cockpit for some 42 years. His airline career spans from DC-3s, to B-747s. He has accumulated some 33,000 hours in such aircraft as the Vickers Viscount, B-727, B-757/767, and the last 10 years in the B-747. Because of the FAA's discriminatory rule, he was removed from the "left" seat, and has spent the last 5 years as "flight engineer," serving on the B-747. Having some 25 years' experience flying "long-haul" international trips, he considers himself to be an "expert" on the practical aspects of circadian rhythm and other associated problems. He will share with you some of the stories and happenings, from "DC-3s TO B-747s." —Ed.

Change Is Expensive

I'VE SEEN TREMENDOUS changes in the airline industry over the last 40-plus years. Some good—some bad, but overall, the safety of flight has greatly improved. Some things don't seem to ever change—

It was 1969, and I was flying a B-707 over the North Pacific, from Kadena, Okinawa, to Oakland, Cal., an 11-hour flight. There had been some unusually strong solar (sunspot) activity, and HF communications was bad. I had several mandatory position reports to make, but was unable, due to the solar activity. I couldn't talk to anyone, and yet—at the very same moment, everyone at home was watching live—*in color*—a man walk on the Moon! Something's wrong here!

Now, some 35 years later, it hasn't changed. At times, I still cannot talk to anyone on HF. Recently, we have had the most powerful solar storms in recorded history. Plays havoc with HF com. Yes, sat-com is available, and in daily use, but it's expensive, so most airlines have elected to not sign up for that service/use. No changes here!

Spatial Disorientation or Vertigo?

IT WAS ABOUT 10:30 pm on a dark, windy night as my friend, Hank, and I left Baton Rouge in a C-182 for the flight back to Dallas. The weather was forecast to be windy, with gusts to 30 mph out of the south. The ceiling was to be around 3000 ft. The overcast sky began to lower as we proceeded to the northwest.

We were, of course, going VFR and were navigating VOR to VOR. To stay out of the clouds, I had to continuously descend in altitude, as our nav lights and rotating beacon would light up the clouds as we got too close. I was now less than 1000 ft above the ground, and the visibility had become quite restrictive. I could see only a very few lights on the ground.

As I approached Tyler, Texas, I decided we should stop and get fuel as planned. It was now after midnight, and a lonely Tower controller cleared us to land and said he would call the local fueler and have him come out to meet us. After topping off the tanks, we filed a new flight plan and took off for Dallas.

The C-182 had all the latest equipment available. The problem was, I had no training in its use! The ceiling was reported to be 1500 ft and 3 miles visibility. Very marginal for VFR at night! I decided to go ahead and try to "sneak" underneath and get home. I was comfortable in the use of the radio and planned to call Dallas Approach Control for clearance to enter their area. We never got there.

As I took off from Tyler, the tower controller cleared us to turn on course and wished us a good flight. As I climbed out and began my turn toward Dallas, I noticed that the lights on the ground were very hazy. It was an unpopulated area and very shortly lost all contact with ground references during the turn. It was very black outside the window, and that's where I continued to look! Had I been trained, I would have looked at the horizon gyro, the vertical speed indicator, the altimeter, and the airspeed indicator and see that I was in a rapidly descending turn! I will never forget those next few minutes! I can

Continued →

see it all now, some 46 years later, as clear as if it happened just yesterday!

My mind was going a thousand miles an hour. What's wrong! I knew something was wrong! I did not realize the consequences of losing all visual references to the horizon on a pitch-black night!

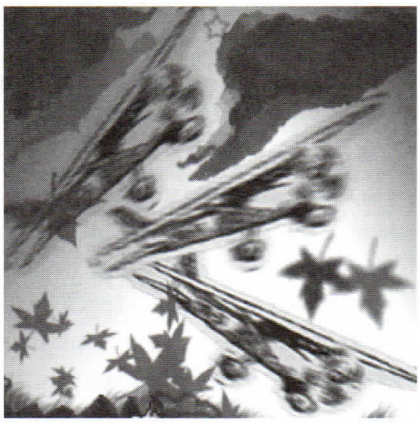
As my mind was desperately trying to figure out what was going on, I suddenly became aware of SPEED! The sound of airspeed caused me to suddenly look at the airspeed indicator and I was shocked! I was doing 195 mph indicated! I was thinking I should have completed that 90-degree turn toward Dallas and should level the wings!

I remember looking out the window as I applied left aileron and saw a couple of lights on the ground in the upper-left corner of the windshield. I "fixed" on those lights and leveled out. I then saw a slight glow in the sky, highlighting something just ahead. TREES! I was below the tops of a tree line just ahead, probably no more than 15 feet off the ground, doing 200 mph! I pulled back suddenly, and heard a loud bang! when the wings struck the tree tops!

I again lost contact with all visual references as I zoomed up, and up! I knew when I entered the clouds because the sky lit up as the nav and beacon lights made the clouds glow very brightly! Again, confusion was filling my mind! "Why is it so quiet," I wondered? This thought was interrupted by the sound of the stall warning horn! I looked at the airspeed indicator and saw 30mph! I must have zoomed the aircraft into an almost straight-up attitude and was literally "hanging on the prop!" I remember pushing forward on the wheel, hard!

Time seemed to freeze! With the sound of the stall warning horn in the background, my whole life flashed before me. I had heard of this happening to people when their mind sensed that death was near. I even saw the headlines in tomorrow's newspaper.

As I struggled to regain control of the aircraft, I was again losing



altitude fast! I again saw some lights in the upper part of the windshield, "locked in" on them, and leveled the wings. Speed at that time was about normal, and I was at 700 ft above the ground.

I was, however, heading *east*, not west.

I saw the Tyler airport beacon straight ahead, just as the Tower operator interrupted the radio silence by saying, "Cessna 18A, are you in trouble?"

He had evidently watched as our lights entered the clouds, later reappearing but going the wrong direction! I calmly stated we would like to return for a landing.

He cleared us to land, and we parked in the same spot we were in before. I asked if he would call a cab for us, as we would be spending the night.

After parking the aircraft, I looked at the wings, and saw a great deal of "green stain" where the tree leaves had been pulverized on impact at near-200 mph but no damage.

The next day, we proceeded uneventfully on to Dallas in good weather. I didn't see Hank again for many years.

I had often thought of sending that story in to *Flying Magazine* for the monthly "*I Learned About Flying From That.*" I never did, but I surely did learn and was fortunate. I had survived an experience that too many didn't survive, and they became one of those "statistics."

I vowed to never fly again at night, at least until I had my instrument rating, and I didn't.

Parakeets *Los!*

In the '60s, there was a popular hobby of keeping caged parakeets at home. We hauled thousands of them in the DC-3, and they were usually in a large cage that was kept in the aft baggage compartment. A door separated that compartment from the main cabin.

Occasionally, the stewardess would go through the door to get a bag or something for one of the passengers. This one time when she opened the door, 500 parakeets that had gotten loose in the baggage compartment came swarming into the main cabin.

Those poor birds were terrified and flew wildly around the cabin dropping "bombs" on all the passengers. People were scrambling for a magazine, newspaper, or anything to cover their heads with.

We landed shortly, and when the main cabin door was opened, the state of Kansas was to be populated with wild parakeets.

FP

Fatigue and Desynchronosis in Aircrews

Recognition of the causes and signs of fatigue is central to safe and effective air operations.

By Virgil D. Wooten, M.D.

Since World War II, flight operations have been increasingly performed over longer distances, longer intervals, and across multiple time zones. The biology governing the performance of men and women has not changed, however. The timing, quality, and quantity of sleep needed may vary among individuals, but among all people, unalterable physiological needs exist.

Efforts are being made within aerospace to design and employ behavioral and pharmacological interventions to overcome the effects of fatigue and sleepiness in personnel required to operate in a sleep-deprived condition and at times when they would normally be sleeping.

Accidents are caused by human error 80% of the time. The role of fatigue and circadian rhythm disorders (desynchronosis) in these mishaps is probably underestimated. Recognition of the causes and signs of fatigue is central to safe and effective air operations.

The tendency to sleep cycles over a 24-hour period. Maximal sleepiness occurs between 0600 and 0800. Although not as imposing, another episode of sleepiness occurs between 1400 and 1600. Adaptation to a new time zone or shiftwork pattern takes up to 3 weeks, depending on individual differences, the frequency and magnitude of the time shifts. Various environmental (light, activity) and social factors (sleep habits, social interactions, work schedule) may either assist or prevent the accommodation to a new schedule.

Sleepiness and fatigue cause reduced ability to function. Lapses (the failure to respond to a situation) increase. Lapses may be associated with microsleeps (episodes of sleep lasting 0.5 to 10 seconds), but can also occur without sleep onset. The four sleep-related factors involved in fatigue-induced performance impairments are the circadian phase of the biological clock, the presence of acute sleep loss, the presence of cumulative sleep loss, and the presence of sleep inertia. Lapses increase 2 to 10 times during night operations without preexisting sleep loss. Acute sleep loss (following a single night of sleep loss) results in 4 to 10 times more lapses, while chronic sleep deprivation by reducing sleep 2-3 hours per night for 1 week may increase lapses by 3 to 5 times normal. Sleep inertia is the difficulty awakening from a sleep episode. Sleep inertia results in increased lapses and is most likely to be present after abrupt awakenings and awakening from stages 3 and 4 NREM sleep. The potential for catastrophe due to lapses is enormous. An aircraft going 250 kts on a glidepath, for example, can travel over 400 feet during a 1-second lapse. Microsleeps have been shown to occur in aircrew during landing approaches in commercial carriers.

The degree of resulting fatigue and risk of mishaps are dependent on the type of aircraft, mission, operations schedule, and environmental conditions. Increased workload and turbulence tend to exacerbate the effects of sleep loss and jet lag. Reaction times may be markedly slowed, which can be critical when rapid reactions are necessary. False responding also increases, i.e. the pilot may take action when no action is warranted, especially when aware of having missed signals. The resulting anticipation of another event and overattention on individual signals or problems further reduces situational awareness. Fatigue increases calculation errors, logical errors and ineffective problem solving. The member is less able to think of new solutions and repeatedly tries the same approach to a situational problem.

Memory deficits progressively worsen with fatigue and sleep loss.

Dr. Wooten is the Special Medical Consultant in Sleep Disorders to the Federal Air Surgeon, an FAA Aviation Medical Examiner, and the Medical Director, TriHealth Sleep and Alertness Center.

Continued →

The sleepy and tired crewmember reads or hears instructions repeatedly but cannot retain the information, leading to critical errors and uncertainty about the status of the situation. Performance variability results from increased lapses and errors of omission. Although the crewmember often becomes aware of the shortcomings in performance and responds by trying to increase self-motivation and effort, performance improvement is short-lived. He/she may perceive the operation as more stressful and tiring as the effort continues. Ultimately, the crewmember's motivation to perform well and avoid risks erodes.

No individual is immune to the effects of sleep loss and fatigue, although there are individual differences in the ability to tolerate sleep loss. After one night of sleep loss, half of healthy individuals perform reasonably well, but the remainder exhibit moderate to severe performance deficits. After 36 hours, there is little difference between individuals in their ability to perform—-all have severe performance deficits.

The ability of a fatigued crewmember to self-assess alertness is also limited. In fatigued individuals, initial good performance early on may give a false sense of security. As time goes by, performance deteriorates. A crewmember is also more likely to overestimate his or her ability to perform if asked whether he or she is tired or able to perform. Relief from other crewmembers when signs of fatigue are observed (eyelids drooping, yawning, irritability, forgetfulness) is crucial.

Sleep Hygiene Techniques

- Use the bed for sleep only—avoid watching TV, music, business, arguing in bed.
- Avoid looking at the time. Set an alarm and ignore the time.
- Avoid alcohol, caffeine, and heavy meals before bedtime.
- Schedule a worry time, planning session, and wind-down time before getting into bed. Make lists of things to do the next day.
- Make the bedroom quiet, comfortable, dark, and secure. Use white noise generators if the environment is noisy. Minimize disruptions.
- Get out of bed after lying awake for more than 20 minutes—do something boring or use relaxation techniques.
- Avoid exercise and hot baths within 3 hours of bedtime.
- Exercise regularly, in the morning or afternoon.
- Keep a regular bedtime and get-up time.
- Do not spend excessive amounts of time in bed, e.g., if you can sleep only 7 hours, spend no more than 7.5 hours in bed.
- Avoid excessive napping, which can interfere with the ability to sleep at night.

Poor sleep habits may contribute to fatigue. Therefore, sleep hygiene techniques are useful countermeasures for desynchronosis.

Every flight operation has its own tempo, time required to perform the major tasks, personnel structure, and number of personnel. There are a number of different aerospace scenarios, ranging from mundane short- and long-haul ferrying operations, to combat and space flight. Prevailing cultural attitudes may pose a hindrance to adequate resting and napping. Our society now sleeps about an hour less on average than our ancestors a century ago. Sleep and the demand for productivity are at odds, and adult napping is virtually frowned upon.

Extensive research into fatigue by the DOT and DOD has yielded important information about techniques to improve performance and safety during prolonged and/or nighttime flying. Basic principles to keep in mind are listed below. Naps are defined as intentional sleep lasting less than half the length of the major sleep period.

- Do not overwork or under-sleep before flying
- Naps taken before and at the beginning of flights at night improve performance during and at the end.
- Two nights of normal sleep before greatly improve performance during the operation.
- Two nights of normal sleep at the end of an operation are necessary to recover from the effects of sleep deprivation.
- A night off in a long series of night operations helps restore function.

Continued on page 8

FATIGUE from page 7

- Naps are possible during the day, especially in the mid-afternoon sleepiness phase.
- Naps are a stopgap approach to improve performance and safety for limited periods of time, not an indefinite substitute for long sleep periods during biological night.
- Attempts should be made to anchor sleep when sleeping in a different time zone by getting some of the sleep during home base sleeping hours.
- The longer the nap, the better the improvement in performance.
- The longer the nap, the longer it takes to awaken (more sleep inertia).
- Longer and harder operations require more napping.
- At least 20 minutes should be allowed to awaken from a nap to allow dissipation of sleep inertia.
- Noise and activity help dissipate sleep inertia.
- When possible, engage in conversation, stretch, and move about to improve alertness.
- Caffeine can help maintain alertness but may disrupt sleep if used too close to desired sleep times.
- Alcohol use may interfere with sleep quality and performance.
- Napping will not promote circadian adjustment to night flying.
- Relaxation techniques and sleep hygiene can assist napping and adjustment to a new circadian schedule.
- The napping environment should be as free from noise, light, temperature extremes, and interruptions as possible.
- Lying down and sleeping is more beneficial than trying to sleep chest elevated.
- Maintain a meal schedule with healthy and nutritional food to minimize gastrointestinal problems associated with night operations.

Stimulants and sedatives are currently used in U.S. military and foreign commercial operations. There may be a role for stimulants such as modafanil, pemoline, methylphenidate, and amphetamines in defined settings. The same is true for short- and intermediate-acting sedatives. Even short-acting sedatives can impair next-day performance, however, and reasonable concerns exist about the effect of stimulants on sleep, emotions, and performance. However, for the time being, U.S. private pilots and flight crews are prohibited from using the medications discussed above.

References

1. Caldwell JA. The impact of fatigue in air medical and other types of operations: a review of fatigue facts and potential countermeasures. *Air Med J* 2001 Jan-Feb;20(1):25-32
2. Samel A, Wegmann H-M, Vejvoda M, et al. Two-crew operations: Stress and fatigue during long-haul night flights. *Aviat. Space Environ. Med.* 1997; 68:679-87.
3. Crew factors in flight operations: The initial NASA-Ames field studies on fatigue. *Aviat. Space Environ. Med.* 1998; 69 (9, Suppl.):B1-60.
4. Ferrer CF, Bisson RU, French J. Circadian rhythm desynchronosis in military deployments: a review of current strategies. *Aviat. Space Environ. Med.* 1995; 66:571-8.
5. Emonson DL, Vanderbeek RD. The use of amphetamines in U.S. Air Force tactical operations during Desert Shield and Storm. *Aviat. Space Environ. Med.* 1995; 66:260-263.

FP

ART, IRAQI STYLE

By Mark Terry

THIS PICTURE OF a statue (above) is a nice work of art, so how come you never see anything like this on the evening news? — only negative comments seem good enough for our journalists that report your daily news programs.

The statue was made by an Iraqi artist named Kalat, who for years was forced by Saddam Hussein to make the many hundreds of bronze busts of Saddam that dotted Baghdad. This artist was so grateful that the Americans liberated his country that he melted three of the fallen Saddam heads and made a memorial statue dedicated to the American soldiers and their fallen comrades. Kalat worked on this night and day for several months.

To the left of the kneeling soldier, is a small Iraqi girl giving the soldier comfort as he mourns the loss of his comrade in arms.

The statue, currently on display outside the palace that is now home to the 4th Infantry division, will eventually be shipped and shown at the memorial museum in Fort Hood, Texas.

DR. GUY BALDWIN NAMED OKLAHOMA AVIATOR OF THE YEAR

Dr. Baldwin is a senior AME who practices in Tulsa, Okla.—Ed.

BY MIKE HUFFMAN

JOE CUNNINGHAM started publishing *The Oklahoma Aviator* in the early 1980s. Shortly thereafter, in 1984, he began an annual tradition that would continue until he died in 1999, that of honoring an outstanding supporter and promoter of aviation in the state.

He called his award the "Oklahoma Aviator of the Year." Previous award winners include names well known around Oklahoma.

Since Joe's death, no *Aviator of the Year* awards have been made. However, [wife and co-publisher] Barbara and I have long intended to continue the tradition, and what better year could there be than 2003, this glorious centennial of flight year?

This year's Oklahoma Aviator of the Year Award winner, presented as part of the Oklahoma Aeronautics Commission's 40th Anniversary party, is Dr. Guy D. Baldwin. Guy lives with his wife, Felice, and his children, Brittny and Hunter, in Tulsa and maintains a family medical practice there. The entire family enjoys aviation; they put in many volunteer hours at aviation events.

Guy learned to fly over 30 years ago between college and medical school. His first airplane was an 85-hp Aeronca Champ. "When I think back to the things we did in that airplane, we are lucky to have survived," says Guy.

Since then, he has amassed over 4000 flight hours in airplanes, seaplanes, gliders, helicopters, and aerobatic airplanes. He holds Air Transport Pilot (ATP), Commercial Pilot, and Instrument ratings. He also holds Certified Flight Instructor-Instrument and Multi-Engine Instructor ratings, as well as helicopter and glider ratings. He is also an Aerobatic Competency Evaluator rating. He currently flies an Extra 300 aerobatic airplane, a North American Harvard/T-6, and a Cessna 210.

Dr. Guy Baldwin is one of the most active aviation medical examiners in the nation, providing medical exams

Dr. Baldwin (left) receives Oklahoma Aviatior of the Year plaque from Publisher Mike Huffman.

to over 2000 airmen each year and maintaining a close working relationship with the FAA Aeromedical Branch. He writes monthly aeromedical columns for *The Oklahoma Aviator* and *General Aviation News* and has written for other publications including *Flying*, *Sport Aviation*, and *The Flying Physician*.

He sits on the Experimental Aircraft Association's aeromedical council, the Spartan School of Aeronautics advisory board, the Tulsa Air and Space Musuem board, the Will Rogers airshow board in Claremore, and the Airshow Oklahoma board in Muskogee. Guy was instrumental in reactivating the International Aerobatic Club Chapter 10 in Tulsa, with its regular aerobatic practice sessions at Claremore Regional Airport and participation in IAC-sponsored aerobatic competitions around the region.

Guy performs air shows in his Extra 300 aerobatic airplane, donating the acreage of his wing to advertising the Make-A-Wish Foundation. "I am most excited to work with the Make-A-Wish Foundation in bringing awareness to their work or fulfilling a dream to fly with a child."

He enjoys giving media rides in addition to mingling with the audience and signing autographs. "It is truly rewarding when you can talk to young children that dream to fly someday and to new pilots that are filled with excitement and questions," says Guy.

Continued on page 12

PILOT HIRING (from page 1)

The hiring upturn is beginning, and the recovery of the airline industry is suggested by increased pilot ATP graduates. In 2004, it is predicted that about 5,000 pilots will find cockpit seats – mostly to charter and regional jet operations. The major airlines are actively recalling previous crewmembers from furlough. America West has now recalled 100 percent of its furloughed pilots.

The opportunity for the age-sixty pilot to gain FAA extension of the Age Sixty closure of commercial carrier employment is still quite weak due to the multiple factors:

- √ 9/11 Impact in passenger load factor
- √ Aviation industry debt of enormous degree
- √ Bankruptcy of carriers
- √ Public fear of terrorism
- √ Excess of unemployed pilots
- √ Pool of young inexperienced pilots searching for slots in cockpits
- √ FAA resistance to extend the Age Sixty arbitrary number

Airline corporate recovery from its massive debt since 9/11 is yet guarded, and is predicted to be slow and troubled, with early profitability a conservative and careful prediction.

Couple the above factors with junior pilots "encouraging" older captains to retire "Before Age Sixty" or "By Age Sixty," it appears that the rapid future of extension of the FAA's Age Sixty ruling can be still cloudy, barring positive legal court interventions. Based on Age Sixty discrimination factors – the court challenge (pilots vs. FAA) is still in process and may yet be long. The Professional Pilots Federation plans a legal challenge again to the age discrimination pilot issues in May 2004.

CAMA will present a current update on the Age Sixty question at the "CAMA Sunday" meeting in Anchorage, AK on May 2, 2004.

Reference: January 2004 *Airline Pilot Careers* Magazine.

FP

NEW MEMBERS

Sabaa N. Abady, M.D.
Sandia Building – NewMaudi
Egyptian Civil Aviation Medical Council
Cairo Airport Street
Cairo, Egypt
Phone: 012-3492558
Radiologist AME

Amany I. Abbass, M.D.
Egyptian Civil Aviation Medical Council
Cairo Airport Street
Cairo. Egypt
Phone: (unavailable)

Miranda L. Abdulla, M.D.
Ministry of Civil Aviation Egypt
Cairo Airport Street
Cairo, Egypt
Phone: 202-3427480
Psychiatry AME

John G. Allen, M.D.
1824 Roxbury Road
Columbus, OH 43212
Phone: 614-481-1918
Ophthalmology Pilot AME

Betty Anderson
3541 Chiniak Bay Drive
Anchorage, AK 99515
Phone: 901-271-4512
Medical Certification FAA

David W. Ashley, M.D.
121 Harbor View Avenue
Sanderstown, RL 02874
Phone: 401-294-7321
Family Practice AME

Douglas R. Burnett, M.Ed.
P.O. Box 1457
Norman, OK 73070
Phone: 405-954-6214
Medical Education FAA

Blake V. Chamberlain, M.D.
15010 Pleasant Valley Drive
Houston, TX 77062
Phone: 281-488-5838
Aerospace Med. Pilot AME

Bradley R. Craig, M.D.
597 – B Salmon Creek Road
Okanogan, WA 98841
Phone: 509-826-1762
Internal/Emergency Medicine AME

Milton C. Dewhirst, M.D.
11835 Cloudy Creek Court
Colorodo Springs, CO 80921
Phone: 719-596-0008
Family Practice AME

Earl W. Edwards, M.D.
100 Gran Blvd. Paseos, Suite 112
PMB 146
San Juan, PR 00926
Phone: 787-757-2271
Family Practice AME

Ahmed Mohamed Farid El Saharty, M.D.
37 Ahmed alon El elaa Nasr City
Cairo, Egypt
Phone: 28879383
Surgery AME

Maged Fouad El-Rayes, M.D.
3 "A" El Yaacubi St. Helioplis
Cairo, Egypt
Phone: 012-3767275
Cardiology AME

Maha Nobil Gawdat, M.D.
23 Hananin abd El Kadar Street
The 6th zone Nasr City
Cairo, Egypt
Phone: 010-3413153
Ophthalmology AME

Jack M. Gibson, M.D.
900 Main, Suite 280
Peoria, IL 61602
Phone: 309-672-4107
OB/GYN Pilot AME

Chenoah Gudel, D.O.
18652 North 50th Ave.
Glendale, AZ 85308-4843
Phone: 979-571-0132
Medical Resident

Dalia A. Hashish, M.D.
70 El Hegazz Street
Cairo, Egypt
Phone: 202-6344479
Ophthalmology AME

Lamia A. Hashish, M.D.
70 El Hegag Street
Cairo, Egypt
Phone: 010-1244090
Family Practice AME

Joseph J. Heck, D.O.
P.O. Box 530520
Henderson, NV 89053-0520
Phone: 702-617-1655
Emergency Medicine AME

Jason J. Hughes, D.O.
7410 West Louise
Glendale, AZ 85310-5630
Phone: 623-537-6628
Medical Resident

James C. Johnson, D.O.
3138 Angela Drive
Grove City, OH 43123
Phone: 614-277-9829
Family Practice Pilot AME

Loren Scott Kane, M.D.
Kane Internal Medicine, PA
2700 Coltsgate Raod, Suite 101
Charlotte, NC 28211
Phone: 204-367-4373
Internal Medicine AME

Charles Kilo, M.D.
4685 Tamiami Trail North
Naples, FL 34103-3004
Phone: 239-263-6062
Internal Medicine AME

Tom Lipps, M.D.
Occupational Medicine & Health
265 Fremont Street
Battle Creek, MI 49015
Phone: 269-969-6159
Occupational Medicine AME

Continued →

CAMA Welcomes Our New Members to the Growing Body of Aviation Medicine Advocates

Kevin Lopez-Shirley, M.D.
Arnot Medical Services PC
3073 South Hamilton Street, Suite 109
Painted Post, NY 14870-8554
Phone: 607-936-2089
Internal Medicine AME

Andrew H. Miller, M.D.
1604 Hospital Parkway, Suite 301
Bedford, TX 76022-6931
Phone: 817-684-9970
Cardiology Pilot

Mohamed Lotfly Mohamed, M.D.
6 – Beer Sabaa Street Nasrcity
Cairo, Egypt
Phone: 2-010-6677435
Cardiology AME

Basavaraj Mutnal, M.D.
655 Erie Street, P.O. Box 348
Three Rivers, MI 49093
Phone: 269-279-2120
Internal Medicine Pilot AME

Medhat Bahy El-Din Mohamed Osman, M.D.
Egyptian Civil Aviation Medical Council
Cairo Airport Street
Cairo, Egypt
Phone: 025-79523
Family Practice AME

David G. Patterson, D.O.
25620 Gibraltar Road
Flat Rock, MI 48134
Phone: 734-789-9355
Family Practice AME

John P. Reasoner, M.D.
P.O. Box 15405
Colorado Springs, CO 80935
Phone: 719 332-4497
Family Practice/Occ. Med. AME

Corby D. Ropp, D.O.
802 East Ragland Avenue
Kingsville, TX 78363-5724
Phone: 316-592-7496
Aviation MedicinePilot AME

Mark S. Rubin, M.D., F.A.C.S.
550 Memorial Circle, Suite N
Ormond Beach, FL 32174-5055
Phone: 386-673-3939
Ophthalmology Pilot AME

Christopher Schenk, M.D.
Broomfold, The Waled Garden
Loxwood, West Sussex RH14 0QS
England, UK
Phone: 444-0-7786-357528
Occ/Aviation Medicine Pilot AME

Robert D. Sparks, D.O.
2255 Ridge Road, Suite 306
Rockwall, TX 75087
Phone: 972-771-5366
Family Practice Pilot AME

Kerrick L. Stout, M.D.
P.O. Box 1253
Dillingham, AK 99576
Phone: 907-842-1702
Family Practice AME

Ashraf Khairy Abdallah Taha, M.D.
25, Street 270 New Maadi, Cairo
Cairo, Egypt
Phone: 010-3030534
Family Practice AME

Joseph L. Torres, M.D.
Florida Sports & Family Health Center
591Oak Commons Blvd., Suite A
Kissimmee, FL 34741
Phone: 407-935-1192
Family Practice AME

Charles W. White Jr., M.D.
Family Physicians of Lexington
250 Boswell Street
Lexington, TN 38351
Family Practice AME

Gary Wilkholm, M.D.
247 West Harvard Blvd.
Santa Paula, CA 93060
Phone: 805-525-0907
Family Practice AME

Jeffrey Williams, M.D.
Vallley Immediate Care, LLC
1600 Delta Waters Road, Suite 107
Medford, OR 97504
Phone: 541-858-2515
Emergency Medicine AME

Chris Zahnle, M.D.
41 Brookwood Court
Ottumwa, IA 52501
Phone: 641-684-2921
Internal Medicine Pilot AME

George B. Zeiner, M.D.
Occupational Health Svs.
Muhlenberg Town
1000 Tuckerton Court
Reading, PA 19605
Phone: 610-988-4000
Aerospace/Occupational Med. AME

Tanya Zielinski, M.D.
10578 High Hollows, Apt. 267
Dallas, TX 75230-4711
Phone: 214-369-0409
Psychiatry AME

In Memoriam
Fred O. Hemming, M.D.

A former president of the Civil Aviation Medical Association (1976), Dr. Hemming passed away in April 2001. He was born in Edinburg, Scotland, in 1924. He emigrated to Canada and became a Canadian Federal Aviation Medical Examiner in 1961.

In 1967, Dr. Hemming was the Regional Medical Officer for the Canadian government then served as Civil Aviation Medical Advisor from 1969 to 1970, when he became the Assistant chief of Medical Services for Canadian Pacific Airlines. In addition to his professional career, he participated in Canadian and American medical organizations, including AsMA, the Airline Medical Directors Association, and the Canadian Aeronautics and Space Institute.

Editorial from page 3

next CAMA educational seminar, where they will present their article to the audience. CAMA will cover some of their expenses. This award will be available to international students as well.

Under the assistance and supervision of Dr. Robin Dodge, the CAMA Web site will be undergoing new changes and will be maintained and updated frequently. The entire bulletin will be available, as well as a searchable data base where our members can locate prior articles and items of interest. We will use the Web site for announcements and information pertaining to CAMA and its membership. The new Web site will be available as soon as possible. My thanks and appreciation goes to Russ Austin for his time and effort in redesigning the CAMA Web site. Mr. Austin is the current Webmaster for Squadron 310 Civil Air Patrol, in Scottsdale, Arizona.

There were many other items discussed in our new strategic plan, and a lot of these are a work in progress under the direction of our committees and vice presidents. I would also like to thank Jim Harris, co-editors, and a great editorial staff for their participation and expertise in making the bulletin even better.

Now that our president, Dr Almand, has us climbing out, we still have a lot of work ahead to keep us airborne and on the correct heading. Thanks to the dedication and commitment of a great board of trustees and a determined group, we should have clear skies and a smooth ride.

I'm looking forward to a successful year with the Civil Aviation Medical Association.

FP

BALDWIN from page 9

Most of all, Guy Baldwin promotes wherever he is—with patients, friends, and total strangers. He is always ready to give someone their first airplane ride, buy them a logbook, and log their first flight. He is very enthusiastic and is always coming up with new ideas for aviation events and fun. In fact, some people have said the most dangerous words that can come from his mouth are, "Hey, I've got an idea!" because somebody (generally Guy's wife) is in for a lot of work!

We asked Guy what might be next on his wish list of accomplishments. "Why, to fly an aerobatic performance at Oskhosh. Last year they featured a group of young acro performers—maybe this year they'll give old guys like me a chance to show off!"

Congratulations, Guy, Felice, and family for a well-deserved award!

Mike Huffman is the co-editor/publisher of The Oklahoma Aviator, a monthly publication for pilots. His wife, Barbara, is the other half of the team. The article is reprinted from the Federal Air Surgeon's Medical Bulletin.

FP

CAMA CONSULTANTS

To our new members and as a reminder to all: This is a list of more experienced AMEs that have volunteered to help with troublesome certification cases. For involved questions, E-mail or fax is preferred. This list is NOT for use by airmen, but solely for AMEs within the CAMA membership.

Frank H. Austin, MD EST
Phone: 703- 471-1769
Fax: 703-450-3104
E-mail: FHAustin@aol.com

Charles A. Berry, MD CST
Phone: 713-978-7755
Fax: 713-978-5001
E-mail: docchuckb@aol.com

David Bryman, D.O. CST
Phone: (602) 549-2291
Fax: (602) 788-7951
E-mail: flydoc85d@aol.com

Mark C. Eidson, MD CST
Phone: 817-599-9472
Fax: 817- 599-9472
E-mail: MARK@EIDSON.ORG

A. J. Parmet, MD CST
Phone: 816-561-3480
Fax: 816-561-4043
E-mail: AJParmet@cysource.com

Gordon L. Ritter, DO MST
Phone: 520-776-9830
Fax: 513-751-5660
E-mail: gordon@rittaire.com

Robert A. Stein, MD EST
Phone: 513-751-0080
Fax: 513-751-5660
E-mail: Bobxtein47@aol.com

M. Young Stokes III, MD CST
Phone 903-465-8116
Fax: 903-465-8120
E-mail: mysiii@flash.net

James L. Tucker, MD EST
Phone: 256-329-7788
E-mail: JLTucker@mindspring.com

Mark Thoman, MD CST
Phone: 515-270-2364
Fax: 515-986-0227
E-mail: PARO1795@aol.com

John D. Hastings, MD CST
Phone: 918-747-7517
Fax: 918-742-7947
E-mail: hastings20@msn.com

H. Stacy Vereen, MD EST
Phone: 404-761-2166
Fax: 404-761-2168
E-mail: Stacyv@earthlink.net

CIVIL AVIATION MEDICAL ASSOCIATION

Sustaining and Corporate Members

The financial resources of individual members alone cannot sustain the Association's pursuit of its broad goals and objectives. Its forty-six year history is documented by innumerable contributions toward aviation health and safety that have become a daily expectation by airline passengers worldwide. Support from private and commercial sources is essential for CAMA to provide one of its most important functions: that of education. The following support CAMA through corporate and sustaining memberships:

Sustaining Members

James R. Almand, Jr., M.D.
R.L. Bendixen, M.D.
Forrest M. Bird, M.D., Ph.D.
Stephen V. A. Blizzard, M.D.
David Bryman, D.O.
Per-Johan Cappelen, M.D.
John R. Capurro, M.D.
Halford R. Conwell, M.D.
Gary E. Crump, P.A.
Robin E. Dodge, M.D.
Francis C. Hertzog, Jr., M.D.
James N. Heins, M.D.
John D. Mudrock, M.D.
Gordon L. Ritter, D.O.
Robert A. Stein, M.D.
Christian Steindl, M.D.
M. Young Stokes III, M.D.
James L. Tucker, Jr., M.D.
Albert van der Waag, Jr., M.D.
Alex M. Wolbrink, M.D.
Ingrid Zimmer-Galler, M.D.

Corporate Members

Aventis Pharmaceuticals
Kathleen Briggs
1676 Fieldview Lane
Bethlehem, PA 18015

Banyan International Corp.
P.O. Box 1779
Abilene, TX 70604-1779

Continental Airlines
9900 Richmond Ave.
Houston, TX 77210-4807

Data Transformation Corp.
108-D Greentree Road
Turnersville, NJ 08012

HP Heartstream
2401 4th Ave., Suite 500
Seattle, WA 98121-1436

Medaire, Inc
1301 E. McDowell Rd, #204
Phoenix, AZ 85006-2665

Motara Instruments, Inc.
7866 North 86th Street
Milwaukee, WI 53224

Nonin Medical Inc.
2605 Fernbrook Lane North
Plymouth, MN 55447-4755

Percussion Aire Corp.
Forrest M. Bird, M.D., Pres.
Sandpoint, ID 83864-0817

Rummel Eye Care, P.C.
1022 Willow Creek Rd.
Prescott, AZ 86301-1642

Schering Corporation
Kenilworth, NJ 0733

Stereo Optical Company Inc.
Thomas Judy, CEO
Chicago, IL 60641
773-772-2869

Titmus Optical
3311 Corporate Drive
Petersburg, VA 23805-9288

Harvey Watt & Co., Inc.
P.O. Box 20787
Atlanta, GA 30320

Thank You For Supporting the Civil Aviation Medical Association.

NUTRITION, OBESITY, AND AVIATION MEDICINE, PART II

BY DAVID BRYMAN, D.O., BOARD-CERTIFIED BARIATRIC PHYSICIAN

This article focuses on the non-medical treatment of obesity. Part III will review the medical and surgical options. In the last article, we discussed the health consequences of overweight and obesity. We looked at how this widespread disease with its multiple co-morbid conditions plays an important part of aviation medicine in the new millennium. With 55 percent of the US population overweight or obese, it is imperative for aviation medical practitioners to have a sound understanding of the medical aspects of obesity and its management.

AS A MEMBER of the American Board of Bariatric medicine, I have seen many physician offices where there has been some confusion on the treatment of obesity, and primarily on the appropriate use of medication for weight loss. Before subjecting a patient to medical treatment, one must be sure that medication is an appropriate intervention.

In general, the use of medicine for treatment of obesity should be considered in patients who have significant risk based on their body composition. These patients typically have a body mass index (BMI) greater than 30, or a BMI greater than 27 with at least two co-morbid conditions—diabetes, hyperlipidemia, sleep apnea, hypertension, etc.

Considering only BMI in adults can often be misleading. For example, one must account for lean body mass, total body water, and body fat when deciding on an intervention. In my experience, if the lean body mass is less than 50 percent of the total body weight, and the BMI is greater than 30, this is a patient that may benefit from medication (watch for Part III in the next issue for more detail).

For the purpose of this article, let us assume that a patient is overweight but not obese, with a BMI between 25 and 30, and without co-morbid conditions. In this case, I would recommend diet and exercise intervention, rather than medicine for weight loss.

To discuss dieting, we must first look at what makes us hungry and what brings about satiety. Satiety is defined as the process that brings eating to a halt and what maintains inhibition over further eating after consumption. Satiation is the state produced by fulfillment of a specific need such as hunger or thirst.

Our society is obsessed with the influence of food on health. Consumers spend billions of dollars on products they hope will help decrease food intake.

I believe that the composition of the diet we eat is a primary cause of morbidity and mortality. We are bombarded by articles, commercials, ads, flyers, and word of mouth on numerous weight-loss diets. Which of these work and which are simply fads?

The human appetite system is a redundant biological system that operates through changes in behavior with numerous afferent inputs. The system is sensitive to external and internal environment (e.g., temperature, pregnancy) and favors equilibrium between energy intake and expenditure, thus maintaining weight. This equilibrium can be disrupted and shift body weight upward, creating a new equilibrium that will result in a higher weight. Unfortunately, human evolution favors over-consumption rather than under-consumption.

Metabolically, the appetite control system resides primarily in the liver. The liver is the main site of assimilation, metabolism, and distribution of nutrients. It communicates information about fuel status and stores to the brain. Previous learned behavior is a factor at this level.

When discussing satiety, one must consider what signals the cessation of ingestion, what causes intra- meal satiety, inter- meal satiety, and post-ingestion satiety. These signals are important in maintaining inhibition of further eating after ingestion.

The satiety signals include nutrition content, taste, smell, macronutrient proportion, volume, weight, energy content, gastric stretch, CCK, biological, environmental, and cognitive factors.

When satiety occurs, it is activated by the rostromedial hypothalamus, specifically the ventromedial nucleus. (Studies have shown that a bilateral lesion in this area causes hyperphagia, resulting in obesity.) With that in mind, let us look at the effects of protein, fat, and carbohydrates on satiety.

In a study done by Hill and Blundell, protein (meat) proved to be the most satiating, when compared with a high-carbohydrate (vegetarian) meal, as evidenced by smaller intake in a subsequent

Continued →

evening meal Furthermore, they found that a high-protein (HP) meal-produced greater sensation of fullness and decreased the desire to eat, relative to a high-carbohydrate (HC) meal of the same calories. Both obese and normal subjects decreased subsequent intake of food after a high-protein meal, indicating that protein was more satiating than carbohydrates.

Carbohydrates appear to have an effect in limiting appetite in the short-term, compared with protein; however, there seems to be a more immediate effect on suppressing hunger. All carbohydrates are not the same. Some carbohydrates stimulate while others restrict excess energy consumption. Short-chain carbohydrates are sweet and are likely to promote over-consumption. Complex carbohydrates may have an "intake-restraining" effect. The ratio of to ß links, as well as branches, are factors affecting satiety, which reach well beyond chain length alone.

When counseling pilots about nutrition, it should be noted that carbohydrates cause drowsiness, where protein wakes you up. So a pilot is better off with a protein bar, rather than a candy bar, if he would like to be more alert. The opposite is probably true also. It's better not to have a high-protein meal right before bedtime if one wants to get to sleep sooner.

The most controversial area of research has to do with comparing carbohydrates to fats, as it relates to satiety and weight gain. In one study comparing high-fat diets with high-carbohydrate diets, obese women 21-56 years old with body mass indexes of 35-48 were allowed to consume either a high-carbohydrate or high-fat lunch followed by an afternoon snack. The post-meal satiety was similar; however, there was significantly higher energy consumption with the high-fat diet. In another study comparing meatballs with pasta, food intake was significantly higher after the pasta preload, and the satiety rating higher after the meatballs.

Besides consuming too much energy, another disadvantage of consuming a high-fat diet is that high-fat diets may cause both insulin and leptin resistance. Leptin (from the Greek *leptos*, meaning *thin*) is a protein hormone with important effects in regulating body weight, metabolism, and reproductive function. Leptin provides the body feedback from fat cells to decrease appetite. Leptin may interact with other systems that can cause a carbohydrate preference in ingestion. There is a great deal of new research going on in this area.

Alcohol is a major player in appetite and metabolism. Alcohol suppresses fat and carbohydrate oxidation, which may increase hunger. Alcohol is oxidized first before fat, which delays satiety resulting from fat metabolism. Alcohol bypasses the appetite regulatory system and can stimulate energy intake.

A recent study compared the effects of giving subjects alcohol a half hour prior to a meal verses an isovolumetric, non-alcoholic lager, then having them consume an ad lib buffet lunch to evaluate the effect of alcohol on appetite. There were no difference in appetite ratings between the two groups; however, there was a 30 percent higher energy intake at lunch after drinking the alcohol. It's no wonder that restaurants have their customers wait in the bar prior to being seated.

In patients who are trying to lose weight, it is important to understand that alcohol stimulates appetite and delays satiety. This, of course, is the opposite of the desired goal.

Some psychological explanations for delay in satiety following a preload of alcohol include the fact that alcohol causes disinhibition and relaxation and, as a result, may allow people to continue eating. Also, associative conditioning may allow the learned behavior of eating while drinking to perpetuate this combination of activities. *FP*

Sensible Dieting Tips

- Eat protein, as this will lead to satiety for longer periods of time.
- Decrease consumption of carbohydrates, but this does not mean you can consume as much protein as you want, as portions still need to be limited to balance energy intake.
- Limit alcohol in the diet, especially before meals, as this will lead to over-consumption of food by 30 percent.
- Decrease fats in the diet.
- Avoid fad diets, or quick weight-loss schemes, as these tend to sacrifice lean body mass, leading to weight regain.
- Avoid taking medications for weight loss, unless evaluated by a competent physician who has an understanding and respect for these medications.
- Finally, seek the advice of a good board-certified nutritionist, and get an individual program that takes into account your body composition and medical history, not just weight or the body mass index.

On The Horizon

CAMA SUNDAY 2004

Your Civil Aviation Medical Association planning committee will present its annual "CAMA Sunday" Aviation Medical meeting in Anchorage, Alaska, Sunday May 2, 2004. This CAMA Sunday program, occurring in the Hilton Hotel, Dillingham/Katmai Room, will follow the Airline Medical Director's meeting on May 1, to which ALL CAMA MEMBERS are invited. Both meetings will occur at the same meeting site.

CAMA Sunday's program subject will be the AGE 60 PILOT and a SPECTACTULAR group of speakers will be presenting.

Make your plans NOW to:

- √ Be at Aerospace in Anchorage May 1-7, 2004
- √ Attend the Airline Medical Directors meeting, Saturday, May 1
- √ Attend CAMA Sunday, May 2
- √ Stay for the CAMA luncheon, May 3
- √ Enjoy AsMA and Anchorage
- √ Bring your salmon fishing gear

CAMA Headquarters
P.O. Box 23864
Oklahoma City, OK 73123-2864

October 6 - 10, 2004
We are meeting in
Omaha, Nebraska
Make plans to attend

FAA Aviation Medical Examiner Seminar Schedule

2004

April 23-25	Dallas, Texas	Aviation Physiology/HF
May 3-6	Anchorage, Alaska (AsMA)	Cardio
June 21-25	Oklahoma City, Okla.	Basic
July 9-11	Denver, Colo.	Aviation Physiology/HF
August 6-8	McLean, Va.	Ophth/Otolaryn/Endocrin
September 13-17	Oklahoma City, Okla.	Basic
November 5-7	Tampa/Ft. Lauderdale, Fla., area	Neuro/ Psychol/Phy
November 15-19	Oklahoma City, Okla.	Basic

For information, call your regional flight surgeon. To schedule a seminar, call the FAA Civil Aerospace Medical Institute AME Programs Office (405) 954-4830

Aerospace Medical Association Annual Meeting Schedule

May 2 – 6, 2004	Anchorage, Alaska
May 8 – 12, 2005	Kansas City, Missouri

Civil Aviation Medical Association Annual Meeting Schedule

October 6 – 10, 2004	Omaha, Nebraska, Marriott Omaha Hotel
October 5 – 9 , 2005	Charleston, South Carolina Renaissance Charleston Hotel Historic District
October 4 - 8, 2006	Ottawa, Canada, Ottawa Marriott Hotel

Visit CAMA's Web Site
www.civilavmed.com